

CLAIMS

What is claimed is:

1. A circuit operative to acquire system identification data broadcast on a channel, comprising:

logic circuitry operative to determine that an access probe failure occurred on the channel based on a failure to detect an acknowledgement message on the channel in response to a reverse channel message produced for transmission on the channel; and in response to the access probe failure determined on the channel, the logic circuitry is operative to generate reverse link limited channel data including at least one of: channel identification data associated with the channel, base station identification data associated with the channel, and location identification data.

2. The circuit of claim 1 wherein a wireless device includes the circuit and wherein the logic circuitry is operative to attempt to register the wireless device with a base station on the channel in response to at least one of: the determined access probe failure, an attempt to acquire the system identification data broadcast on the channel, and an elapsed period of time.

3. The circuit of claim 2 wherein the logic circuitry is operative to not attempt to register the wireless device with the base station on the channel if at least one of: a current location of the wireless device is in close proximity to a location associated with the location identification data, the reverse link limited channel data was generated, and a signal quality metric associated with the system identification data broadcast on the channel is less than a threshold level.

4. A wireless device operative to acquire system identification data broadcast on a channel, comprising:

logic circuitry operative to determine that an access probe failure occurred on the channel based on a failure to detect an acknowledgement message on the channel in response to a reverse channel message produced for transmission on the channel; and in response to the access probe failure determined on the channel, the logic circuitry operatively generates reverse link limited channel data including at least one of: channel identification data associated with the channel, base station identification data associated with the channel, and location identification data; and

memory, operatively coupled to the logic circuitry, containing the reverse link limited channel data.

5. The wireless device of claim 4 wherein the logic circuitry is operative to attempt to acquire the system identification data broadcast on the channel in response to the access probe failure determined by the logic circuitry.

6. The wireless device of claim 4 wherein the logic circuitry is operative to attempt to register the wireless device on the channel in response to at least one of: the determined access probe failure, an attempt to acquire the system identification data broadcast on the channel, and an elapsed period of time.

7. The wireless device of claim 6 wherein the logic circuitry is operative to attempt to register the wireless device by at least one of a power up registration, parameter change registration, timer based registration, zone based registration, and distance based registration.

8. The wireless device of claim 6 wherein the logic circuitry is operative to not attempt to register the wireless device on the channel if at least one of: a current location of the wireless device is in close proximity to a location associated with the location identification data contained in the memory, the memory contains the reverse link limited

data, and a signal quality metric associated with the system identification data broadcast on the channel is less than a threshold level.

9. The wireless device of claim 4 wherein the logic circuitry clears the reverse link limited channel data stored in the memory if the wireless device powers down.

10. A wireless device operative to acquire system identification data broadcast on a channel comprising:

a transceiver operative to receive forward channel messages on at least a forward channel, and operative to transmit reverse channel messages on at least a reverse channel;

logic circuitry, operatively coupled to the transceiver, and operative to detect the forward channel messages from the transceiver and to provide the reverse channel messages to the transceiver, and operative to determine that an access probe failure occurred based on a failure to detect an acknowledgement message on the forward channel in response to the reverse channel messages transmitted on the reverse channel; and in response to the access probe failure determined on the channel, the logic circuitry is operative to attempt to register the wireless device with a base station, and the logic circuitry is operative to generate reverse link limited channel data including at least one of: a channel identification data associated with the channel, base station identification data associated with the channel, and location identification data; and

memory, operatively coupled to the logic circuitry, containing the reverse link limited channel data received from the logic circuit, in response to a failure to register the wireless device with the base station on the reverse channel.

11. The wireless device of claim 10 wherein the logic circuitry clears the reverse link limited channel data stored in the memory if the wireless device powers down.

12. The wireless device of claim 10 wherein the logic circuitry is operative to not attempt to register the wireless device on the channel if at least one of: a current location of the wireless device is in close proximity to a location associated with the location identification data, the memory contains the reverse link limited channel data, and a signal quality metric associated with at least one of the received forward channel messages is less than a threshold level.

13. Memory containing instructions executable by one or more processing devices that causes the one or more processing devices to:

determine that an access probe failure occurred on a channel, based on a failure to detect an acknowledgement message on the channel in response to a reverse channel message produced for transmission on the channel; and

generate reverse link limited channel data including at least one of: channel identification data associated with the channel, base station identification data associated with the channel, and location identification data associated with a wireless device, in response to the determined access probe failure.

14. The memory of claim 13 containing executable instructions that cause the one or more processing devices to attempt to register the wireless device with a base station on the channel in response to at least one of: the determined access probe failure, an attempt to acquire system identification data broadcast on the channel, and an elapsed period of time.

15. The memory of claim 14 containing executable instructions that cause the one or more processing devices to not attempt to register the wireless device on the channel if at least one of: a current location of the wireless device is in close proximity to a location associated with the location identification data, the reverse link limited data was generated,

and a signal quality metric associated with the system identification data broadcast on the channel is less than a threshold level.

16. A method in a wireless device to acquire system identification data broadcast on a channel comprising:

determining that an access probe failure on a channel occurred, based on a failure to detect an acknowledgement message on the channel in response to transmitting reverse channel messages by the wireless device on the channel; and

generating reverse link limited channel data, including at least one of: channel identification data associated with the channel, base station identification data associated with the channel, and location identification data, in response to determining that the access probe failure on the channel occurred.

17. The method in the wireless device of claim 16 further including attempting to acquire the system identification data broadcast on the channel in response to determining that the access probe failure on the channel occurred.

18. The method in the wireless device of claim 17 further including attempting to register the wireless device with a base station on the channel in response to at least one of: determining that the access probe failure on the channel occurred, attempting to acquire the system identification data broadcast on the channel, and an elapsed period of time.

19. The method in the wireless device of claim 18 wherein attempting to register the wireless device includes at least one of a power up registration, a parameter change registration, a timer based registration, a zone based registration, and a distance based registration.

20. The method in the wireless device of claim 18 further including not attempting to register the wireless device on the channel if at least one of: a current location of the

wireless device is in close proximity to a location associated with the location identification data, the reverse link limited channel data was generated, and a signal quality metric associated with the system identification data broadcast on the channel is less than a threshold level.

21. A method in a wireless device to acquire system identification data broadcast on a channel comprising:

- determining that an access probe failure occurred, based on a failure to receive an acknowledgement message on a forward channel in response to transmitting reverse channel messages by the wireless device on a reverse channel;

- attempting to acquire the system identification data broadcast on the forward channel by the wireless device in response to determining the access probe failure on the channel occurred and if the forward channel was not previously identified as reverse link limited;

- attempting to register the wireless device in response to at least one of:
determining that the access probe failure on the channel occurred, attempting to acquire the system identification data broadcast on the channel, and an elapsed period of time; and

- storing reverse link limited channel data including at least one of: channel identification data associated with the channel, base station identification data associated with the channel, and location identification data, in response to a failure to register the wireless device on the reverse channel.

22. The method in the wireless device of claim 21 further including not attempting to register the wireless device on the channel if at least one of: a current location of the wireless device is in close proximity to a location associated with the location identification data, the reverse link limited channel data was generated, and a signal quality metric

associated with the system identification data broadcast on the channel is less than a threshold level.